

This listing of claims will replace all prior versions of claims in the application:

**Listing of Claims:** Please amend the claims as follows:

**We claim:**

**Claim 1. (Withdrawn)** A polynucleotide whose sequence is set forth in SEQ ID NO 1, SEQ ID NO 3 or SEQ ID NO 5.

**Claim 2. (Withdrawn)** The polynucleotide according to Claim 1, commencing with position 70, which encodes for a polypeptide having the properties of the major allergen Phl p 4 from *Phleum pratense*.

**Claim 3. (Withdrawn)** A polynucleotide comprising a nucleotide sequence which encodes for the major allergen Phl p 4 from *Phleum pratense*.

**Claim 4. (Withdrawn)** A DNA molecule which hybridizes with the polynucleotide sequence according to claim 1 under stringent conditions and originates from DNA sequences of *Poaceae* species.

**Claim 5. (Withdrawn)** A DNA molecule which encodes for a polypeptide which cross-reacts immunologically with the major allergen Phl p 4 from *Phleum pratense* and originates from DNA sequences of *Poaceae* species.

**Claim 6. (Withdrawn)** A DNA molecule corresponding to a partial sequence or a combination of partial sequences according to claim 1 which encodes for an immunomodulatory, T-cell-reactive fragment of a group 4 *Poaceae* allergen.

**Claim 7. (Withdrawn)** The DNA molecule according to Claim 6, which encodes for a Phl p 4 fragment which is

- (a) fragment 1-200, with amino acids 1-200 of Phl p 4, or
- (b) fragment 185-500, with amino acids 185-500 of Phl p 4.

**Claim 8. (Withdrawn)** The polynucleotide sequence according to claim 1, which encodes for an immunomodulatory T-cell-reactive fragment, wherein said nucleotide sequence has been specifically modified by specific mutation of individual codons, elimination or addition.

**Claim 9. (Withdrawn)** The polynucleotide according to Claim 8, wherein said mutation results in the replacement of one, more or all cysteines of the corresponding polypeptide with another amino acid.

**Claim 10. (Withdrawn)** A recombinant DNA expression vector or a cloning system comprising the polynucleotide according to claim 1, functionally linked to an expression control sequence.

**Claim 11. (Withdrawn)** A transformed host organism which expresses the polypeptide according to claim 13.

**Claim 12. (Withdrawn)** A process for the preparation of a polypeptide of claim 13 comprising culturing a host organism which expresses said polypeptide and isolating the corresponding polypeptide from the culture.

**Claim 13. (Currently Amended)** A polypeptide which is comprises

- (a) a polypeptide whose which comprises the polypeptide sequence is set forth in SEQ ID NO: 2, SEQ ID NO: 4 or SEQ ID NO: 6,
- (b) a polypeptide comprising a mutation, elimination or addition of at least one amino acid residue in the polypeptide sequence set forth in (a),
- (c) a polypeptide comprising a polypeptide sequence which is encoded by a the polynucleotide whose sequence is set forth in SEQ ID NO: 1, SEQ ID NO: 3 or SEQ ID NO: 5, or
- (d) (c) a variant polypeptide which comprises at least 90.8% sequence identity to the polypeptide sequence set forth in SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 is encoded by a polynucleotide sequence which hybridizes to the complement of the polynucleotide sequences in (c) under stringent conditions and originates from DNA sequences of Poaceae species

- (e) (d) a polypeptide which comprises at least 79.9% sequence identity to the polypeptide comprising amino acids 219 to 362 of the polypeptide sequence set forth in SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 ~~is encoded by a single nucleotide polymorph of the polynucleotide sequence set forth in (e),~~
- (e) a polypeptide which comprises at least 69.7% sequence identity to the polypeptide comprising amino acids 219 to 251 of the polypeptide sequence set forth in SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6

wherein each of the polypeptides of (a) to (e) is immunogenic and induces an immunomodulatory T-cell reactive response in a host.

**Claim 14. (Cancelled)**

**Claim 15. (Previously Presented)** A pharmaceutical composition comprising at least one polypeptide according to Claim 13 and a pharmaceutically acceptable carrier.

**Claim 16. (Withdrawn)** A method for the diagnosis and/or treatment of an allergic condition which is triggered by group 4 allergens of the *Poaceae* and/or for the prevention of said allergic condition in a subject in need thereof comprising administering to said subject an effective amount of a polypeptide of claim 13.

**Claim 17. (Cancelled)**

**Claim 18. (Cancelled)**

**Claim 19. (Cancelled)**

**Claim 20. (Currently Amended)** An immunotherapeutic ~~vaccine~~ vaccine comprising a polypeptide of claim 13 and an acceptable carrier, wherein said vaccine is capable of generating an immunomodulatory, T-cell response in a host.

**Claim 21. (Currently Amended)** An immunomodulatory, T-cell-reactive polypeptide fragment of a group 4 *Poaceae*-allergen which comprises a partial sequence of 50 to 350 amino acids ~~or a combination of partial sequences of at least one polypeptide of claim 13.~~

**Claim 22. (Currently Amended)** The An immunomodulatory, T-cell-reactive polypeptide fragment of a group 4 *Poaceae* allergen according to claim 21 which comprises is

- (a) fragment 1-200, with amino acids 1-200 of the polypeptide of claim 13 Phl p 4, or
- (b) fragment 185-500, with amino acids 185-500 of the polypeptide of claim 13 Phl p 4.

**Claim 23. (Currently Amended)** The variant polypeptide according to Claim 13 ~~(b) (c)~~ which comprises a mutation, wherein said mutation results in the replacement of at least one cysteine residue of a polypeptide whose sequence is set forth in SEQ ID NO: 2, SEQ ID NO: 4 or SEQ ID NO: 6 with another amino acid residue.

**Claim 24. (Cancelled)**

**Claim 25. (Currently Amended)** An immunotherapeutic vaccine comprising a polypeptide of claim 14 13 and an acceptable carrier, wherein said vaccine is capable of generating an immunomodulatory, T-cell response in a host.

**Claim 26. (New)** A polypeptide according to claim 13 wherein each of the polypeptides of (a) to (e) is immunogenic and induces an immunomodulatory T-cell reactive response in a host.

**Claim 27. (New)** An immunotherapeutic vaccine comprising a polypeptide of claim 21 and an acceptable carrier, wherein said vaccine is capable of generating an immunomodulatory, T-cell response in a host.

**Claim 28. (New)** An immunotherapeutic vaccine comprising a polypeptide of claim 22 and an acceptable carrier, wherein said vaccine is capable of generating an immunomodulatory, T-cell response in a host.

**Claim 29. (New)** An immunotherapeutic vaccine comprising a polypeptide of claim 23 and an acceptable carrier, wherein said vaccine is capable of generating an immunomodulatory, T-cell response in a host.

**Claim 30. (New)** A pharmaceutical composition comprising at least one polypeptide according to claim 21 and a pharmaceutically acceptable carrier.

**Claim 31. (New)** A pharmaceutical composition comprising at least one polypeptide according to claim 22 and a pharmaceutically acceptable carrier.

**Claim 32. (New)** A pharmaceutical composition comprising at least one polypeptide according to claim 23 and a pharmaceutically acceptable carrier.

**Claim 33. (New)** A polypeptide which comprises

- (a) a polypeptide which is encoded by single nucleotide polymorph of a polynucleotide whose sequence is set forth in SEQ ID NO: 1,
- (b) a single amino acid polymorph of a polypeptide whose sequence is set forth in SEQ ID NO: 2,

**Claim 34. (New)** A polypeptide which comprises a polypeptide variant of the sequence set forth in SEQ ID NO: 2 with the amino acid variations set forth clones 1 to 11:

- (a) clone 1: L54, I57, V62, S76, T100, N107, Y137, P141, T142, K189, Q219, K221, L227, I231, S235, T237, V238, K248, A258, I264, K270, K282, L287, P299, A321, L322, S332, Q346, P347, T351, L357, N358, V362, S384, A410, D419, Y456, A457, K460, E472;
- (b) clone 2: L54, I57, V62, T76, T100, N107, Y137, P141, T142, K189, Q219, K221, I231, S235, T237, V238, K248, A258, I264, K270, K282, L287, P299, A321, L322, S332, Q346, P347, T351, L357, N358, V362, S384, A410, D419, Y456, A457, K460, E472;
- (c) clone 3: P141, K282, L287, P299, L347, E351;
- (d) clone 4: G289, A410, D419, Y456, A457, K460, E472;
- (e) clone 5: L347, E351, S384, A410, D419, Y456, A457, K460, E472;
- (f) clone 6: N107, Y137, P141, T142, K189, Q219, K221, I231, S235, T237, V238, K248, A258, I264, K270, K282, L287, P299, A321, L322, S332, Q346, P347, T351, L357, N358, V362, S384, A410, D419, Y456, A457, K460;
- (g) clone 7: K248, A258, I264, K270, K282, L287, P299, A321, L322, S332, Q346, P347, T351, L357, N358, V362, S384;

- (h) clone 8: Q219, K221, I231, S235, T237, V238, K248, A258, I264, K270, K282, L287, P299, E351;
- (i) clone 9: M231, T246, A251, C263, G289, L307, L309, E334;
- (j) clone 10: Q219, K221, I231, S235, T237, M238, V242, V246, K248, A258, I264, K270, K282, L287, P299, A321, L322, S332, Q346, P347, T351, N358, V362, S384, insertion of GA between positions 407 and 408, N452, Y456, A457, K460, E472;
- (k) clone 11: insertion of GA between positions 407 and 408.